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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,273	01/18/2002	Frederick M. Mako	MAKO-9 CONT II	2218

7590 02/04/2003

Ansel M. Schwartz
Suite 304
201 N. Craig Street
Pittsburgh, PA 15213

EXAMINER

SPITZER, ROBERT H

ART UNIT	PAPER NUMBER
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1724

10

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/045,273	MAKO ET AL	
	Examiner	Art Unit	
	Robert H. Spitzer	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 19, 2002 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over German reference No. 4014153 in view of Nixdorf (5,087,272) and EPO reference No. 327,439. German reference No. 4014153 shows a filter system for an engine, which has at least two microwave sources, a microwave cavity containing a particulate filter in communication with the microwave sources through appropriate wave guides to receive the microwaves and to be heated thereby to remove the soot filtered from the exhaust gases from the engine. The microwave sources are described to be "adjacent to the at least one exhaust gas filter body" (emphasis added). While "adjacent" is an adjective which means lying near, close or contiguous, adjoining, or neighboring, the definition does not specifically include "at the ends". Thus, the claims differ from the structure and process of German reference No. 4014153 in the microwave sources being positioned

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with respect to the particulate filter so that the filter will "receive microwaves at the two ends for the particulate filter to be uniformly heated by the microwaves from each of the two ends from the microwave sources" and in the particulate filter being "coated with a microwave absorbing material". Nixdorf (5,087,272) shows a filter which is a wall-flow filter fabricated from aluminum oxide coated with a layer of silicon carbide in order to enhance the microwave heating and states that this filter "is heated uniformly with microwave energy" (emphasis added). EPO reference No. 327,439 shows an exhaust gas filtration system for a diesel engine which has a filter within a microwave cavity wherein the microwave source is coupled at the two ends of the filter through appropriate waveguides. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to structure the particulate filter of German reference No. 4014153 of a material which is coated with a microwave absorbing material, in view of the showing of Nixdorf (5,087,272) and that the placement of the microwave sources at the ends of the filter element will result in the uniform heating of the filter material, in view of the showing of such microwave source placement by EPO reference No. 327,439. The "uniform" heating is achieved because of the use of the microwave absorbing material.

4. Applicant's arguments filed December 19, 2002 have been fully considered but they are not persuasive. While the Examiner is of the opinion that the "adjacent" placement of the microwave sources in the Fig. 2 embodiment of German reference No. 4014453 meets the limitation that the particulate filter is "positioned in relation to the microwave sources to receive microwaves at the two ends for the particulate filter to be

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uniformly heated by the microwaves from each of the two ends from the microwave sources", he has added the EPO reference No. 327,439, which clearly shows the location of the waveguides from microwave generator 5 at the two ends of the filters. Further, the reference to Nixdorf (5,087,272) shows that the microwave absorbing material coated filter element "is heated uniformly with microwave energy". Thus, the placement of a filter element which is coated with microwave absorbing material within the housing of German reference No. 4014153 will result in the uniform heating of such filter element by the microwave sources. Further, the EPO reference No. 327,439 also shows that the microwave source can be coupled to the filter elements at the ends thereof. Any other remarks made by Applicants and not specifically commented on by the Examiner have been considered.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (703)308-3794. The examiner can normally be reached on Monday-Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons, can be reached on (703) 308-1972. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 and for After Final communications the fax number is (703) 872-9311.

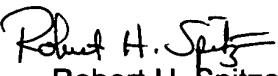
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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Robert H. Spitzer
January 23, 2003


Robert H. Spitzer
Primary Examiner
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January 23, 2003